

## **REMARKS**

Claims 1-3, 6-10, 12, 13, 16-19, 29-35 and 37-42 are pending in the application.

As a convenience to the Examiner, Applicants respectfully submit that dependent claims 2, 3, 6-9, 12, 13, 16-19, 29-32, 34, 35, and 37-40 are currently amended to merely delete the phrase, "all the limitations of which are incorporated herein by reference," which had been added in anticipation of a Rule change by the Office. Dependent claim 42 is currently amended to recite, "The program storage device of claim 10", as suggested by the Office Action with respect to the objection to this claim. Independent claims 1, 10, and 33 are as previously presented.

Claims 10, 12-13, 16-19, 29-30, 32 and 42 stand rejected under 35 U.S.C. § 101.

Claims 1-3, 6-10, 12-13, 16-19, 29-30, 33-35 and 37-40 stand rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,721,734 to Subasic et al., hereinafter, Subasic.

Claims 31-32 and 41-42 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Subasic in view of U.S. Patent No. 6,332,143 to Chase.

Applicants respectfully traverse the rejections based on the following discussion.

### **I. The 35 U.S.C. § 101 Rejection**

Claims 10, 12-13, 16-19, 29-30, 32 and 42 stand rejected under 35 U.S.C. § 101 because the Office Action asserts that the claimed invention is directed to the non-statutory subject matter of a computer program *per se*.

Applicants respectfully submit that the preamble to independent claim 10, "A program storage device readable by machine, tangibly embodying a program of instructions executable by said machine to perform a method of ... , said method comprising, complies with the ruling of In re Beauregard, 53 F.3d 1583 (Fed. Cir. 1995), which addresses the issue of statutory versus non-statutory matter for storage devices.

Furthermore, Applicants respectfully disagree with the Office Action's characterization of independent claim 10 and dependent claims 12, 13, 16-19, 29, 30, 32, and 42 as claiming a computer program *per se*. The storage device of claim 10 is illustrated in Fig. 5, element 445, and may, for example, include a tangible computer disk or tape comprising physically discrete

magnetic domains (not carrier waves, as suggested by the Office Action). The magnetic domains are read by a computer by I/O routines, well known in the art, and cause functional changes within the computer, for example, inputting data addresses.

For at least the reasons outlined above, Applicants respectfully submit that independent claim 10 and dependent claims 12, 13, 16-19, 29, 30, 32, and 42 comply with the statutory requirements of 35 U.S.C. §101. Withdrawal of the rejection of claims 10, 12, 13, 16-19, 29, 30, 32, and 42 under 35 U.S.C. §101 is respectfully solicited.

## **II. The 35 U.S.C. §112, First Paragraph, Rejection**

Claims 10, 12-13, 16-19, 29-30, 32 and 42 stand rejected under 35 U.S.C. §112, first paragraph, because the Office Action asserts that a "program storage device readable by machine" is not disclosed in the Specification.

Applicants respectfully submit that with respect to Fig. 5, the Specification clearly describes, "The computer software may be recorded on a portable storage medium, in which case, the computer software program is accessed by the computer system 400 from the storage device 455". (Specification, page 10, lines 26-26).

For at least the reasons outlined above, Applicants respectfully submit that claims 10, 12, 13, 16-19, 29-30, 32 and 42 comply with the statutory requirements of 35 U.S.C. §112, first paragraph. Withdrawal of the rejection of claims 10, 12, 13, 16-19, 29-30, 32 and 42 under 35 U.S.C. §112, first paragraph, is respectfully solicited.

## **III. The Prior Art Rejections**

### **A. The 35 U.S.C. 102(b) Rejection over Subasic**

#### **1. The Subasic Disclosure**

Subasic discloses a technique for analyzing affect in which ambiguity in both emotion and natural language is explicitly represented and processed through fuzzy logic. In particular, textual information is processed to i) isolate a vocabulary of words belonging to an emotion, ii) represent the meaning of each word belonging to that emotion using multiple categories and scalar metrics, iii compute profiles for text documents based on the categories and scores of their

component words, and iv) manipulate the profiles to visualize the texts. (Abstract, lines 1-9).

Subasic also discloses that the affect lexicon 104 is a list of words (and associated parameters) that pertain to emotion. The affect lexicon contains entries of the form:

<lexical\_entry> <part\_of\_speech\_tag>  
<affect\_category> <centrality>  
<intensity>

as in "arrogance" sn superiority 0.7 0.9.

A lexical entry is a word that has an affectual connotation or denotes affect directly. An affect lexicon is simply a table correlating words with affect entries and having an assigned centrality and intensity. An affect lexicon may be added to directly or from processing documents. An affect lexicon may have 5,000 or more entries. (col. 3, lines 37-54, which is cited by the Office Action).

## 2. Arguments

Independent claims 1, 10, and 33 recite in relevant part,

"matching said predetermined set of regular expressions to said plurality of POS tag sequences from said text document to provide one or more extracted opinions". (emphasis added).

Subasic merely discloses an affect lexicon comprising a table that correlates words with affect entries, having an assigned centrality and intensity. (emphasis added).

In contrast, the present invention matches regular expressions against POS tag sequences, as described in "Opinion Extraction" (Specification, page 5, lines 9-28) and Tables 1 and 2 (Specification, pages 6 and 7, respectively). (emphasis added).

For example, "[[a]] regular expression rule:-( is | are ) \* (<JJ>|<JJR>|<JJS>) + (<NN>|<NNS>) + (<IN>|<TO>) \* (<NMI>|<NNS>) comprises an exemplary POS tag sequence. (Please see, lines 1 and 2 of Table 2 of the Specification on page 7). That is, the regular expression, comprising: the verb *is* or (*| are*); concatenated (+) with an adjective (*JJ*, see Table 1), or a comparative adjective (*JJR*), or a superlative adjective (*JJS*); concatenated with a

singular or mass noun (*NN*), or a plural noun (*NNS*); concatenated with a preposition or subordinating conjunction (*IN*), or *To*; concatenated with a singular or mass noun (*NN*), or a plural noun (*NNS*), is matched to sequences of POS tags from an inputted document (POS tags of text, in Table 2) and the matched sequence of POS tags, i.e., the "regular expression" of the claim language, yields the extracted opinion (Extracted opinion, in Table 2).

The regular expression, described by the claims of the present invention, does not include an affective or emotional component as does the affect lexicon of Subasic. The regular expression of the present invention, instead, comprises a sequence of parts-of-speech. In the present invention, it is only after the opinion, based on the matched POS tag sequence of the regular expression, is extracted that the extracted opinion is subjected to a lexical analysis.

Subasic merely discloses an affect lexicon comprising a table that correlates words with affect entries.

For at least the reasons outlined above, Applicants respectfully submit that nowhere does Subasic disclose, teach or suggest the present invention's features of: "matching said predetermined set of regular expressions to said plurality of POS tag sequences from said text document to provide one or more extracted opinions", as recited in independent claim 1, 10, and 33. Accordingly, Subasic fails to anticipate the subject matter of independent claim 1, 10, and 33, and dependent claims 2, 3, 6-9, 12, 13, 16-19, 29, 30, 34, 35, and 37-40 under 35 U.S.C. §102(e). Withdrawal of the rejection of claims 1-3, 6-10, 12-13, 16-19, 29-30, 33-35 and 37-40 under 35 U.S.C. §102(e) as anticipated by Subasic is respectfully solicited.

## **B. The 35 U.S.C. §103(a) Rejection over Subasic and Chase**

### **1. The Chase Disclosure**

Chase discloses a computerized interactive language reference system that includes a database of terms with associated denotative, connotative and human interest information. ... The system evaluates the passage for positive emotional connotations, negative emotional connotations, global emotional connotations, human interest, connotations of power, connotations of activity and connotations of abstractness/concreteness. (Abstract).

## 2. Arguments

Independent claims 1 and 10 recite in relevant part,

"matching said predetermined set of regular expressions to said plurality of POS tag sequences from said text document to provide one or more extracted opinions". (emphasis added).

The Office Action cites Chase for teaching "the step of graphically displaying said clusters of extracted opinions, wherein said graphically displaying comprises displaying relative proportions of said extracted opinions in said clusters of extracted opinions (*figure 5*), and wherein said graphically displaying comprises displaying said clusters of extracted opinions using a bar-chart (*figure 5*)."

(Office Action, section 6, pages 6 and 7).

Applicants respectfully submit that Chase does not cure the deficiencies of Subasic argued above.

Nowhere does Chase disclose, teach or suggest the present invention's features of: "matching said predetermined set of regular expressions to said plurality of POS tag sequences from said text document to provide one or more extracted opinions", as recited in independent claim 1 and 10.

Instead, Chase merely discloses displaying bar charts of texts conveying positive emotions, negative emotions, global emotion, human interest, power, activity, and abstractness/concreteness. (Fig. 5 of Chase, which is cited by the Office Action).

For at least the reasons outlined above, Applicants respectfully submit that nowhere do Subasic and Chase, either individually or in combination, disclose, teach or suggest the present invention's features of: "matching said predetermined set of regular expressions to said plurality of POS tag sequences from said text document to provide one or more extracted opinions", as recited in independent claim 1 and 10. Accordingly, Subasic and Chase, either individually or in combination, fail to render obvious the subject matter of independent claim 1 and 10, and dependent claims 31, 32, 41, and 42 under 35 U.S.C. §103(a). Withdrawal of the rejection of claims 31, 32, 41, and 42 under 35 U.S.C. §103(a) as unpatentable over Subasic and Chase is respectfully solicited.

#### **IV. Formal Matters and Conclusion**

Claims 1-3, 6-10, 12-13, 16-19, 29-35 and 37-42 are pending in the application.

Applicants respectfully submit that claim 42, as currently amended, answers the claim objection.

Applicants further respectfully submit that the pending claims comply with the statutory requirements of 35 U.S.C. §§101 and 112, first paragraph.

With respect to the rejections of the claims over the prior art, Applicants respectfully argue that the pending claims are distinguishable over the cited prior art of record. In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections to the claims.

In view of the foregoing, Applicants submit that claims 1-3, 6-10, 12-13, 16-19, 29-35 and 37-42, all the claims presently pending in the application, are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest time possible.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

Please charge any deficiencies and credit any overpayments to Attorney's Deposit Account Number 09-0441.

Respectfully submitted,

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